

U.S. Department
of Transportation

United States
Coast Guard



Commandant
United States Coast Guard

2100 Second St., SW
Washington, DC 20593
Staff Symbol: G-SEC-2
Phone: 202-267-1 899

COMDTNOTE 10500

OCT - 2 2001

COMMANDANT NOTICE 10500

CANCELLED: OCT 1 20

Subj : NEW DESIGN FOR AIDS TO NAVIGATION BUOY TOPMARKS

1. PURPOSE. This Notice promulgates a change to the design of Aids to Navigation (ATON) Bi-plane **Topmarks** used on Isolated Danger and Safe Water Buoys.
2. ACTION. District Commanders shall ensure compliance with the provisions of this Notice.
3. DIRECTIVES AFFECTED. Aids to Navigation Manual - Technical, COMDTINST M16500.3A, will be amended to reflect the contents of this Notice in future updates.
4. BACKGROUND. Over the years, there have been several different designs for buoy topmarks. These have included metal bi-planes, large plastic balls secured to aluminum rods, and the current ionomer foam bi-planes mounted on **aluminum** stands. For a number of reasons, the performance of each of these designs has been suboptimal. The current foam **topmarks** are unable to withstand strong winds. The force of the wind causes the **foam** to bend back and forth against the stand, wearing out the attachment points and eventually ripping the **topmark** from the stand. To eliminate this problem, a new **topmark** has been developed that is more robust and more cost-effective than the previous designs.
5. DISCUSSION.
 - a. The new **topmark** design consists of bi-planes made of plywood (see enclosure (1)). The plywood shall be either Medium Density Overlay (MDO) or High Density Overlay (HDO). **MDO** plywood is the type currently used for **ATON** dayboards, and is readily available at CG industrial facilities. It is an exterior-grade plywood with an impregnated-paper overlay that conceals the grain and provides a smooth surface for painting. **MDO** plywood comes with the overlay on one or both sides--either version is acceptable for this application. **HDO** is a higher quality (more expensive) plywood that typically has the overlay on both sides.

DISTRIBUTION - SDL No. 139

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A							*						2	2	2	2	i2	i2	-i2	i	i	i				
B		8	20		1									12	2	I										
C				2							2			2									2			
D				2																					2	
E																										
F																										
G																										
H																										

NON-STANDARD DISTRIBUTION: A:g BRISTOL BAY and MOBILE BAY only (2)

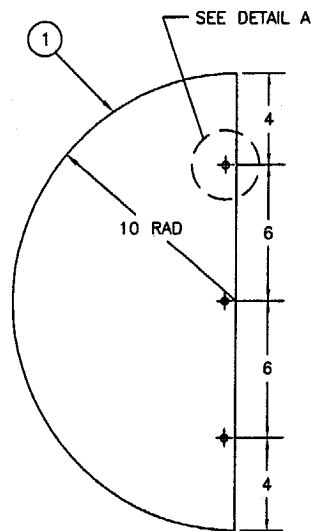
OCT - 2 2001

COMDTNOTE 10500

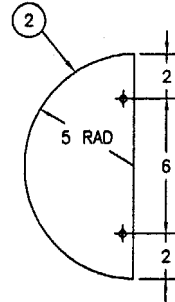
- b. The signal color for the **topmarks** (red or black) can be achieved in one of two ways. The preferred alternative is to apply the same elastomeric film that is currently used on dayboards. Either pressure sensitive or heat-activated adhesives are acceptable. After applying the film to both sides of the bi-plane, the edges shall be coated with a sealant to prevent moisture intrusion. Painting the bi-planes is another option. The paints shall be suitable for long-term exposure to the marine environment. For optimal performance, a primer shall be applied first, followed by a topcoat of the appropriate color. The paints shall be applied to the surfaces and edges of the bi-planes. Whether film or paint is used, the surfaces of the bi-planes shall first be lightly sanded to ensure proper adhesion.
- c. The plywood bi-planes will **fit** on the existing **topmark** stands. However, they are thicker than the current foam design (1/2" vice 3/8"), so longer bolts will have to be used to mount them (use 1/4"-20 x 1-1/4" hex bolts, nuts, and washers).
- d. The new plywood **topmarks** will not be available through the supply system. Units shall purchase them locally or obtain them through their cognizant Industrial Support Command (ISC) or Croup Industrial, as applicable. The **topmark** stands will continue to be in the supply system.
- e. Replacement of the existing foam **topmarks** with the new plywood design shall be by attrition.


R. F. SILVA
ASSISTANT COMMANDANT FOR SYSTEMS
"CHIEF ENGINEER"

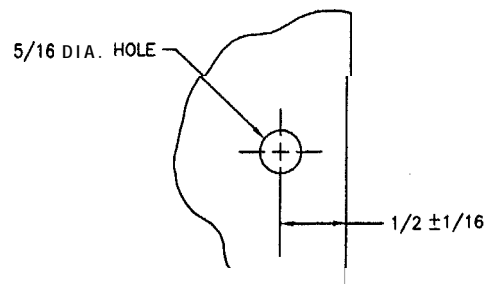
Encl: (1) Civil Engineering Drawing 121144, Revision D



0 FRONT VIEW



(2) FRONT VIEW



DETAIL A

BILL OF MATERIALS

ITEM NO.	NO. REQ.	DESCRIPTION	MATL.	REMARKS
1	-	10" RADIUS BI-PLANE DISK	PLYWOOD	1 1/2 INCH THICK SEE NOTES 2, 3, &
2	-	5" RADIUS BI-PLANE DISK	PLYWOOD	1 1/2 INCH THICK SEE /NOTES 2, 3, &

NOTES:

- THE DISKS ARE MOUNTED ON AN ALUMINUM TOPMARK STAND. REFERENCE CIVIL ENGINEERING DRAWING 121138 FOR DETAILS OF THE STAND.
- PLYWOOD SHALL BE EITHER MEDIUM DENSITY OVERLAY (MDO) OR HIGH DENSITY OVERLAY (HDO).
- PROVIDE IN BLACK OR RED AS REQUIRED. SIGNAL COLOR CAN BE ACHIEVED BY APPLYING ELASTOMERIC FILM (PRESSURE SENSITIVE OR HEAT ACTIVATED ADHESIVES ARE ACCEPTABLE) OR PAINTING. IF ELASTOMERIC FILM IS USED, THE EDGES SHALL BE COATED WITH A SEALANT TO PREVENT MOISTURE INTRUSION.
- EIGHT 10" BLACK BI-PLANE DISKS ARE REQUIRED FOR THE TALL STAND. EIGHT 5" BLACK OR FOUR 10" RED BI-PLANE DISKS ARE REQUIRED FOR THE SHORT STAND.

D 9-03-01	W.D.	CHANGED MATERIAL AND THICKNESS OF ITEMS 1 AND 2.	K.V.
C 8-3-00	S.W.	CHANGED STOCK NUMBERS IN BILL OF MATERIALS.	S.A.
B 4-22-96	S.W.	CHANGED MATERIAL. DELETED ITEM 4 AND NOTE 2.	I S.A.
A 1-22-93	S.W.	MODIFIED STOCK NUMBERS IN BILL OF MATERIALS.	S.A.
REV.	DATE	APPR.	BY
DESIGNED: R.B.	U.S. COAST GUARD		HEADQUARTER:
DRAWN: S.M.	CIVIL ENGINEERING		
TRACED:	BI-PLANE TOPMARK DISK		
CHECKED:			
REVIEWED BY:			
S. McEvoy			
PROJECT ENGINEER			
REVIEWED BY:			
S. D. Walker			
C-ECV-38			
REVIEWED BY:	APPROVED:	DATE	
	R. J. Wells	6 JAN 91	
UNLESS OTHERWISE SPECIFIED:		DRAWING NUMBER	
AU DIMENSIONS ARE IN INCHES.		1 2 1 1 4 4	
TOLERANCES: DIM. ± 1/8		REV D	
SCALE: NONE		SHEET 1 OF 1	